

OIKE

## RAW SEQUENCE LISTING

DATE: 04/18/2001

PATENT APPLICATION: US/09/823,356

TIME: 16:38:06

Input Set : A:\pf0489con.app.txt

Output Set: N:\CRF3\04182001\I823356.raw

PS

ENTERED

2 <110> APPLICANT: Tang, Y. Tom  
 3 Bandman, Olga  
 4 Lal, Preeti  
 5 Hillman, Jennifer L.  
 6 Yue, Henry  
 7 Corley, Neil C.  
 8 Guegler, Karl J.  
 9 Kaser, Matthew R.  
 10 Baughn, Mariah R.  
 11 Shah, Purvi  
 13 <120> TITLE OF INVENTION: HUMAN MEMBRANE SPANNING PROTEINS  
 15 <130> FILE REFERENCE: PF-0489-1 CON  
 C--> 17 <140> CURRENT APPLICATION NUMBER: US/09/823,356  
 C--> 18 <141> CURRENT FILING DATE: 2001-03-30  
 20 <150> PRIOR APPLICATION NUMBER: 09/039,307  
 W--> 21 <151> PRIOR FILING DATE: 1998 March 13  
 23 <160> NUMBER OF SEQ ID NOS: 34  
 24 <170> SOFTWARE: PERL Program  
 26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 238  
 28 <212> TYPE: PRT  
 29 <213> ORGANISM: Homo sapiens  
 31 <220> FEATURE:  
 32 <221> NAME/KEY: misc\_feature  
 33 <223> OTHER INFORMATION: Incyte ID No: 77138  
 35 <400> SEQUENCE: 1  
 36 Met Leu Thr Pro Leu Gly Lys Phe Ser Thr Ala Lys Phe Ala Val  
 37 1 5 10 15  
 38 Arg Leu Pro Arg Val Trp Glu Ala Arg Ala Pro Ser Leu Ser Gly  
 39 20 25 30  
 40 Ala Pro Ala Pro Thr Pro Pro Ala Pro Pro Pro Ser Arg Ser Ser  
 41 35 40 45  
 42 Arg Leu Gly Leu Trp Pro Arg Cys Phe Leu Ile Phe Pro Gln Leu  
 43 50 55 60  
 44 Arg Ile Leu Leu Leu Gly Pro Gln Glu Ser Asn Asn Ser Thr Gly  
 45 65 70 75  
 46 Thr Met Trp Lys Val Ser Ala Leu Leu Phe Val Leu Gly Ser Ala  
 47 80 85 90  
 48 Ser Leu Trp Val Leu Ala Glu Gly Ala Ser Thr Gly Gln Pro Glu  
 49 95 100 105  
 50 Asp Asp Thr Glu Thr Thr Gly Leu Glu Gly Gly Val Ala Met Pro  
 51 110 115 120  
 52 Gly Ala Glu Asp Asp Val Val Thr Pro Gly Thr Ser Glu Asp Arg  
 53 125 130 135  
 54 Tyr Lys Ser Gly Leu Thr Thr Leu Val Ala Thr Ser Val Asn Ser  
 55 140 145 150  
 56 Val Thr Gly Ile Arg Ile Glu Asp Leu Pro Thr Ser Glu Ser Thr

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```

57          155          160          165
58 Val His Ala Gln Glu Gln Ser Pro Ser Ala Thr Ala Ser Asn Val
59          170          175          180
60 Ala Thr Ser His Ser Thr Glu Lys Val Asp Gly Asp Thr Gln Thr
61          185          190          195
62 Thr Val Glu Lys Asp Gly Leu Ser Thr Val Thr Leu Val Gly Ile
63          200          205          210
64 Ile Val Gly Val Leu Leu Ala Ile Gly Phe Ile Gly Gly Ile Ile
65          215          220          225
66 Val Val Val Met Arg Lys Met Ser Gly Arg Tyr Ser Pro
67          230          235
68 <210> SEQ ID NO: 2
69 <211> LENGTH: 83
70 <212> TYPE: PRT
71 <213> ORGANISM: Homo sapiens
72 <220> FEATURE:
73 <221> NAME/KEY: misc_feature
74 <223> OTHER INFORMATION: Incyte ID No: 1381884
75 <400> SEQUENCE: 2
76 Met Met Val Thr Val Val Leu His Leu Ala Phe Gly Gln Arg Leu
77 1          5          10          15
78 Ile Asp Phe Ser His His His Thr Val Ser Asn Ile Leu Phe His
79          20          25          30
80 Cys Ala Leu Ile Leu Cys Lys Lys Glu Pro Gly Ala Lys Ile Ser
81          35          40          45
82 Arg Gly Ala Lys Gly Lys Lys Glu Glu Lys Gln Glu Ala Gly Lys
83          50          55          60
84 Glu Gly Thr Ala Pro Ser Glu Asn Gly Glu Thr Lys Ala Glu Glu
85          65          70          75
86 Val Leu Ser Ile Asn Thr Ser His
87          80
88 <210> SEQ ID NO: 3
89 <211> LENGTH: 515
90 <212> TYPE: PRT
91 <213> ORGANISM: Homo sapiens
92 <220> FEATURE:
93 <221> NAME/KEY: misc_feature
94 <223> OTHER INFORMATION: Incyte ID No: 1427590
95 <400> SEQUENCE: 3
96 Met Ala Ala Ala Gln Glu Ala Asp Gly Ala Arg Ser Ala Val Val
97 1          5          10          15
98 Ala Ala Gly Gly Gly Ser Ser Gly Gln Val Thr Ser Asn Gly Ser
99          20          25          30
100 Ile Gly Arg Asp Pro Pro Ala Glu Thr Gln Pro Gln Asn Pro Pro
101          35          40          45
102 Ala Gln Pro Ala Pro Asn Ala Trp Gln Val Ile Lys Gly Val Leu
103          50          55          60
104 Phe Arg Ile Phe Ile Ile Trp Ala Ile Ser Ser Trp Phe Arg Arg
105          65          70          75

```

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112	Gly	Pro	Ala	Pro	Gln	Asp	Gln	Ala	Gly	Pro	Gly	Gly	Ala	Pro	Arg
113					80					85					90
114	Val	Ala	Ser	Arg	Asn	Leu	Phe	Pro	Lys	Asp	Thr	Leu	Met	Asn	Leu
115					95					100					105
116	His	Val	Tyr	Ile	Ser	Glu	His	Glu	His	Phe	Thr	Asp	Phe	Asn	Ala
117					110					115					120
118	Thr	Ser	Ala	Leu	Phe	Trp	Glu	Gln	His	Asp	Leu	Val	Tyr	Gly	Asp
119					125					130					135
120	Trp	Thr	Ser	Gly	Glu	Asn	Ser	Asp	Gly	Cys	Tyr	Glu	His	Phe	Ala
121					140					145					150
122	Glu	Leu	Asp	Ile	Pro	Gln	Ser	Val	Gln	Gln	Asn	Gly	Ser	Ile	Tyr
123					155					160					165
124	Ile	His	Val	Tyr	Phe	Thr	Lys	Ser	Gly	Phe	His	Pro	Asp	Pro	Arg
125					170					175					180
126	Gln	Lys	Ala	Leu	Tyr	Arg	Arg	Leu	Ala	Thr	Val	His	Met	Ser	Arg
127					185					190					195
128	Met	Ile	Asn	Lys	Tyr	Lys	Arg	Arg	Arg	Phe	Gln	Lys	Thr	Lys	Asn
129					200					205					210
130	Leu	Leu	Thr	Gly	Glu	Thr	Glu	Ala	Asp	Pro	Glu	Met	Ile	Lys	Arg
131					215					220					225
132	Ala	Glu	Asp	Tyr	Gly	Pro	Val	Glu	Val	Ile	Ser	His	Trp	His	Pro
133					230					235					240
134	Asn	Ile	Thr	Ile	Asn	Ile	Val	Asp	Asp	His	Thr	Pro	Trp	Val	Lys
135					245					250					255
136	Gly	Ser	Val	Pro	Pro	Pro	Leu	Asp	Gln	Tyr	Val	Lys	Phe	Asp	Ala
137					260					265					270
138	Val	Ser	Gly	Asp	Tyr	Tyr	Pro	Ile	Ile	Tyr	Phe	Asn	Asp	Tyr	Trp
139					275					280					285
140	Asn	Leu	Gln	Lys	Asp	Tyr	Tyr	Pro	Ile	Asn	Glu	Ser	Leu	Ala	Ser
141					290					295					300
142	Leu	Pro	Leu	Arg	Val	Ser	Phe	Cys	Pro	Leu	Ser	Leu	Trp	Arg	Trp
143					305					310					315
144	Gln	Leu	Tyr	Ala	Ala	Gln	Ser	Thr	Lys	Ser	Pro	Trp	Asn	Phe	Leu
145					320					325					330
146	Gly	Asp	Glu	Leu	Tyr	Glu	Gln	Ser	Asp	Glu	Glu	Gln	Asp	Ser	Val
147					335					340					345
148	Lys	Val	Ala	Leu	Leu	Glu	Thr	Asn	Pro	Tyr	Leu	Leu	Ala	Leu	Thr
149					350					355					360
150	Ile	Ile	Val	Ser	Ile	Val	His	Ser	Val	Phe	Glu	Phe	Leu	Ala	Phe
151					365					370					375
152	Lys	Asn	Asp	Ile	Gln	Phe	Trp	Asn	Ser	Arg	Gln	Ser	Leu	Glu	Gly
153					380					385					390
154	Leu	Ser	Val	Arg	Ser	Val	Phe	Phe	Gly	Val	Phe	Gln	Ser	Phe	Val
155					395					400					405
156	Val	Leu	Leu	Tyr	Ile	Leu	Asp	Asn	Glu	Thr	Asn	Phe	Val	Val	Gln
157					410					415					420
158	Val	Ser	Val	Phe	Ile	Gly	Val	Leu	Ile	Asp	Leu	Trp	Lys	Ile	Thr
159					425					430					435
160	Lys	Val	Met	Asp	Val	Arg	Leu	Asp	Arg	Glu	His	Arg	Val	Ala	Gly

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```

161                               440                               445                               450
162 Ile Phe Pro Arg Leu Ser Phe Lys Asp Lys Ser Thr Tyr Ile Glu
163                               455                               460                               465
164 Ser Ser Thr Lys Val Tyr Asp Asp Met Ala Phe Arg Tyr Leu Ser
165                               470                               475                               480
166 Trp Ile Leu Phe Pro Ser Trp Ala Ala Met Pro Ser Thr Val Phe
167                               485                               490                               495
168 Cys Thr Trp Ser Thr Arg Ala Gly Thr Pro Gly Cys Ser Ala Cys
169                               500                               505                               510
170 Ser Thr Ala Ser Cys
171                               515
173 <210> SEQ ID NO: 4
174 <211> LENGTH: 495
175 <212> TYPE: PRT
176 <213> ORGANISM: Homo sapiens
178 <220> FEATURE:
179 <221> NAME/KEY: misc_feature
180 <223> OTHER INFORMATION: Incyte ID No: 1457779
182 <400> SEQUENCE: 4
183 Met Gly Leu Ser Arg Lys Glu Gln Val Phe Leu Ala Leu Leu Gly
184   1                               5                               10                               15
185 Ala Ser Gly Val Ser Gly Leu Thr Ala Leu Ile Leu Leu Leu Val
186                               20                               25                               30
187 Glu Ala Thr Ser Val Leu Leu Pro Thr Asp Ile Lys Phe Gly Ile
188                               35                               40                               45
189 Val Phe Asp Ala Gly Ser Ser His Thr Ser Leu Phe Leu Tyr Gln
190                               50                               55                               60
191 Trp Pro Ala Asn Lys Glu Asn Gly Thr Gly Val Val Ser Gln Ala
192                               65                               70                               75
193 Leu Ala Cys Gln Val Glu Gly Pro Gly Ile Ser Ser Tyr Thr Ser
194                               80                               85                               90
195 Asn Ala Ala Gln Ala Gly Glu Ser Leu Gln Gly Cys Leu Glu Glu
196                               95                               100                              105
197 Ala Leu Val Leu Ile Pro Glu Ala Gln His Arg Lys Thr Pro Thr
198                               110                              115                              120
199 Phe Leu Gly Ala Thr Ala Gly Met Arg Leu Leu Ser Arg Lys Asn
200                               125                              130                              135
201 Ser Ser Gln Ala Arg Asp Ile Phe Ala Ala Val Thr Gln Val Leu
202                               140                              145                              150
203 Gly Arg Ser Pro Val Asp Phe Trp Gly Ala Glu Leu Leu Ala Gly
204                               155                              160                              165
205 Gln Ala Glu Gly Ala Phe Gly Trp Ile Thr Val Asn Tyr Gly Leu
206                               170                              175                              180
207 Gly Thr Leu Val Lys Tyr Ser Phe Thr Gly Glu Trp Ile Gln Pro
208                               185                              190                              195
209 Pro Glu Glu Met Leu Val Gly Ala Leu Asp Met Gly Gly Ala Ser
210                               200                              205                              210
211 Thr Gln Ile Thr Phe Val Pro Gly Gly Pro Ile Leu Asp Lys Ser
212                               215                              220                              225

```

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```

213 Thr Gln Ala Asp Phe Arg Leu Tyr Gly Ser Asp Tyr Ser Val Tyr
214                230                235                240
215 Thr His Ser Tyr Leu Cys Phe Gly Arg Asp Gln Met Leu Ser Arg
216                245                250                255
217 Leu Leu Val Gly Leu Val Gln Ser Arg Pro Ala Ala Leu Leu Arg
218                260                265                270
219 His Pro Cys Tyr Leu Ser Gly Tyr Gln Thr Thr Leu Ala Leu Gly
220                275                280                285
221 Pro Leu Tyr Glu Ser Pro Cys Val His Ala Thr Pro Pro Leu Ser
222                290                295                300
223 Leu Pro Gln Asn Leu Thr Val Glu Gly Thr Gly Asn Pro Gly Ala
224                305                310                315
225 Cys Val Ser Ala Ile Arg Glu Leu Phe Asn Phe Ser Ser Cys Gln
226                320                325                330
227 Gly Gln Glu Asp Cys Ala Phe Asp Gly Val Tyr Gln Pro Pro Leu
228                335                340                345
229 Arg Gly Gln Phe Tyr Ala Phe Ser Asn Phe Tyr Tyr Thr Phe His
230                350                355                360
231 Phe Leu Asn Leu Thr Ser Arg Gln Pro Leu Ser Thr Val Asn Ala
232                365                370                375
233 Thr Ile Trp Glu Phe Cys Gln Arg Pro Trp Lys Leu Val Glu Ala
234                380                385                390
235 Ser Tyr Pro Gly Gln Asp Arg Trp Leu Arg Asp Tyr Cys Ala Ser
236                395                400                405
237 Gly Leu Tyr Ile Leu Thr Leu Leu His Glu Gly Tyr Gly Phe Ser
238                410                415                420
239 Glu Glu Thr Trp Pro Ser Leu Glu Phe Arg Lys Gln Ala Gly Gly
240                425                430                435
241 Val Asp Ile Gly Trp Thr Leu Gly Tyr Met Leu Asn Leu Thr Gly
242                440                445                450
243 Met Ile Pro Ala Asp Ala Pro Ala Gln Trp Arg Ala Glu Ser Tyr
244                455                460                465
245 Gly Val Trp Val Ala Lys Val Val Phe Met Val Leu Ala Leu Val
246                470                475                480
247 Ala Val Val Gly Ala Ala Leu Val Gln Leu Phe Trp Leu Gln Asp
248                485                490                495
251 <210> SEQ ID NO: 5
252 <211> LENGTH: 156
253 <212> TYPE: PRT
254 <213> ORGANISM: Homo sapiens
256 <220> FEATURE:
257 <221> NAME/KEY: misc_feature
258 <223> OTHER INFORMATION: Incyte ID No: 1481261
260 <400> SEQUENCE: 5
261 Met Leu Ser Ala Arg Asp Arg Arg Asp Arg His Pro Glu Glu Gly
262   1                5                10                15
263 Val Val Ala Glu Leu Gln Gly Phe Ala Val Asp Lys Ala Phe Leu
264                20                25                30
265 Thr Ser His Lys Gly Ile Leu Leu Glu Thr Glu Leu Ala Leu Thr

```

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields for each sequence which presents at least one n or Xaa.

## VERIFICATION SUMMARY

PATENT APPLICATION: US/09/823,356

DATE: 04/18/2001

TIME: 16:38:07

Input Set : A:\pf0489con.app.txt

Output Set: N:\CRF3\04182001\I823356.raw

L:17 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:18 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:21 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD  
L:768 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:770 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11  
L:1559 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:1578 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1595 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1596 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1597 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:1690 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31